

Agentic AI in Research: Community Solutions for Data Challenges

Connie Clare, RDA Global
connie.clare@rda-foundation.org

Trish Radotic, RDA Oceania & East Asia
trish.radotic@rda-foundation.org

Thursday 12 February 2026, 16:00-16:45 UTC

RDA webinar as part of Love Data Week 2026: Where's the Data?



Housekeeping

Recording in Progress

This session is being recorded and presentations will be published online.

Keep Your Mic Muted

Please mute yourself to minimise background noise.

Cameras On Appreciated

We'd love to see your face! Please keep your camera on if possible.

Respectful Dialogue – [RDA's Code of Conduct](#)

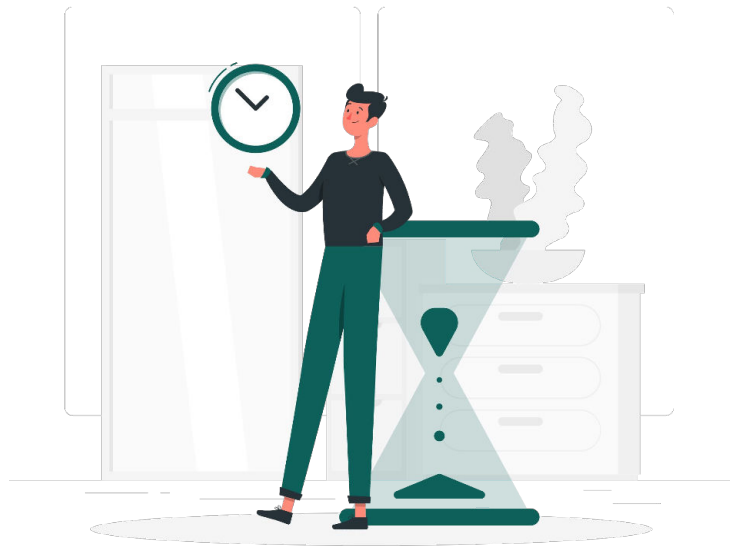
Listen openly and respect all perspectives shared.

Q&A at the end

Please write any questions you have in the chat during the session

 **Questions or comments?** Contact hilary.hanahoe@rda-foundation.org

Today's Agenda



About the RDA

- Vision, Mission and Guiding Principles
- Membership
- Community Groups
- Recommendations and Outputs

RDA and Artificial Intelligence

- Previous Activities
- Agentic AI Consultation
- Key Opportunities and Challenges
- Future Work

About the RDA

The RDA is an **international member-based organisation** focused on the development of **infrastructure** and **community activities** that reduce barriers to **data sharing** and **accelerate data-driven innovation** worldwide.



16,000+ members



150+ countries



Researchers, scientists,
data professionals

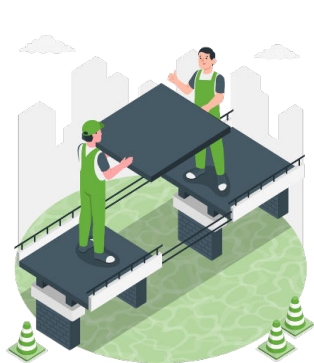


Different disciplines, domains,
thematic fields



[See More Community
Statistics](#)

RDA Values



Vision

Researchers and innovators openly share and reuse data across technologies, disciplines, and countries to address the grand challenges of society.

Mission

The RDA builds the social and technical bridges that enable open sharing and reuse of data.



[How the RDA works](#)

Guiding Principles



Openness



Consensus



Inclusivity



Harmonisation

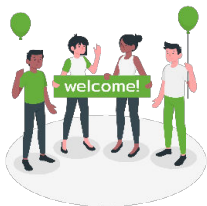


Community-driven



Non-profit &
technology-neutral

Membership



INDIVIDUALS

16,000+

A strategic 'think tank' to enhance constructive dialogue and collaboration on data related topics, and to present the latest research results in many areas.

Collaborate in groups and generate outputs



[Members Directory](#)



ORGANISATIONS

90+

A forum where organisational representatives directly interact and collaborate to develop and implement solutions and best practices.

Adopt, implement and customise outputs



[Organisation Directory](#)



REGIONS

35+

A global perspective to assist in sharing best practices, experiences and common needs to achieve efficiency and reduce duplication of efforts.

Localise (linguistically and culturally) and network



[Regional Groups](#)

MEMBER BENEFITS

JOIN FOR
FREE



Contribute to acceleration of
data infrastructure
developments



Become part of the global
community and expand your
professional network



Create, access and adopt
RDA Recommendations
and Outputs



Receive regular updates
on the work of the
RDA community



Gain expertise in data-related
topics regardless of
career stage



Participate in community
events, including webinars,
workshops and Plenaries



[The value for members](#)



[Become a member](#)



Community Groups

112
GROUPS



WORKING GROUPS (WG)

47

Develop tools, policies, practices and products for data that are adopted by projects, organisations and communities. Lifespan: 12-18 months.

RECOMMENDATIONS:

Concrete deliverables (e.g., running code, tools, standards)



[All Working Groups](#)



INTEREST GROUPS (IG)

63

Focus on solving a specific data sharing problem and identifying what kind of infrastructure needs to be built. Lifespan: As long as group is active.

OUTPUTS:

Best practices, guidelines, new WGs.



[All Interest Groups](#)



COMMUNITIES OF PRACTICE (CoP)

2

'Umbrella groups' that focus on a domain / discipline and have a coordination and awareness raising role. Lifespan: As long as CoP is active (review every 18 months).

OUTPUTS:

New WGs and IGs, bridge building across the RDA and externally.



[All Communities of Practice](#)

RDA Groups & Areas of Focus

Research Data Alliance community organisation by themes and domains

D

Research Domains

Life Sciences & Health

Genomics, health data modelling, marine biology, structural biology

Agricultural Sciences

Crop data interoperability, food security, agricultural standards

Environmental Sciences

Climate data, oceanography, earth sciences monitoring

Social Sciences

Humanities data, archaeology, cultural heritage datasets

Physical Sciences

Materials science, space sciences, physics, astronomy

T

Technical Infrastructure

Data Standards

Metadata frameworks, FAIR principles, quality assurance

Data Repositories

Repository attributes, publishing services, PIDs

Interoperability

Vocabulary services, data citation, discovery tools

Technical Systems

Research software, cloud computing, federated systems

C

Cross-Cutting Themes

Data Governance

Legal frameworks, ethics, indigenous data rights

Education & Training

Skills development, library services, capacity building

Global Collaboration

International standards, regional networks, partnerships

Open Science

Research assessment, transparency, reproducibility

E

Emerging Areas

AI & Machine Learning

AI for research, automated processing, algorithmic ethics

New Technologies

Digital twins, blockchain, IoT data management

Non-Traditional Research

Alternative outputs, new assessment methods

Future Challenges

Sustainability, inclusivity, equity in data science



[Group Directory](#)

Recommendations and Outputs



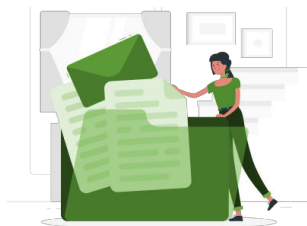
RECOMMENDATIONS

43

RDA's flagship outputs and the equivalent of 'specifications' or 'standards'. Recommendations are reviewed by the RDA community, endorsed by Council and adopted by organisations.



[All Recommendations](#)



SUPPORTING OUTPUTS

50

Useful solutions from RDA groups that serve to educate and inform, but they may not be as clearly adoptable by organisations. These outputs undergo community review.



[All Supporting Outputs](#)



OTHER OUTPUTS

32

Examples include workshop reports, published articles, survey results, etc. produced by RDA groups. Upon request by the groups, these outputs are posted on the RDA website but have no level of endorsement.



[All Other Outputs](#)

Getting Involved in a Group

<https://www.rd-alliance.org/group-directory/>



WORKING GROUP

Artificial Intelligence and Data Visitation (AIDV) WG

Group Stage: WG Wrapping up

Share    

[+ Join Group](#)

[Home](#)

[Posts](#)

[Wikis](#)

[File Repository](#)

[Statement of Work](#)

[Outputs](#)

[Plenaries](#)

[Events](#)

[Members](#) 154

Members



Veronika Stoka



Lucy O Shea



Zeyd Boukhers



Ana Inkret



Deoyani Nandrekar
Heinis



Veereshprasad Sawadi

[See All \(154\) >](#)

Group Details

[Edit](#)

Status: Recognised and Endorsed

Group Focus: Policy, Legal Compliance, and Capacity

Chair(s): Francis P. Crawley, Perihan Elif Ekmekci, Natalie Meyers, Claudia Bauzer Medeiros, Alexander Bernier

Secretariat Liaison: Bridget Walker

TAB Liaison: Anupama Gururaj

Mission The mission of the AIDV-WG is to contribute to building the ethical, legal, social, and technical frameworks for Artificial Intelligence while examining the potential of data visitation to bridge challenges for the open sharing and re-use of data in the framework of Open Science.

Vision The vision of the AIDV-WG is to bring together expertise across disciplines and regions to ensure ameliorate the use of AI in research and innovation across technologies and sectors to address the grand challenges of society while promoting an understanding of how data visitation can contribute to improved data sharing.

...

[View more](#)

https://www.rd-alliance.org/value_rda/rda-and-artificial-intelligence/

🏠 > [The Value of the RDA for ...](#)

RDA and Artificial Intelligence (AI)



Artificial Intelligence (AI) has rapidly transformed various sectors, further driven by mainstream adoption of generative AI technologies like ChatGPT. This swift progress has sparked both high expectations and uncertainties about AI's impact.

AI relies on data, software, and computational resources to generate outputs like predictions and decisions. Significant investments are being made globally, both by public and private entities. However, challenges like data quality, legal issues, and the digital divide must be addressed to harness AI responsibly.

Recognising these trends, the RDA is committed to fostering discussions on AI, providing a forum to explore opportunities and challenges for the RDA community and beyond.

Dedicated webpage

- Projects, Activities
- Resources
- Events
- Community Experts
- Future Work
- RDA Groups

AI-Related RDA Groups and Activities

Groups

- [Artificial Intelligence and Data Visitation WG](#)
- [FAIR Run Time Environments WG](#)
- [FAIR4ML IG](#)
- [Computational Modelling of Health Data WG](#) (Not yet endorsed)

BoFs - Newly Emerging Topics of Interest

- [Is FAIR FAIR? A discussion of the overlaps in the FAIR principles of data management and AI-Readiness](#) (P19, IDW2022)
- [Documenting LLM Interactions throughout the Research Data lifecycle](#) (P25, IDW2025)
- [Autonomous agents at the gate: accelerating data visitation](#) (P26)

 [Join VP26 and P27](#)



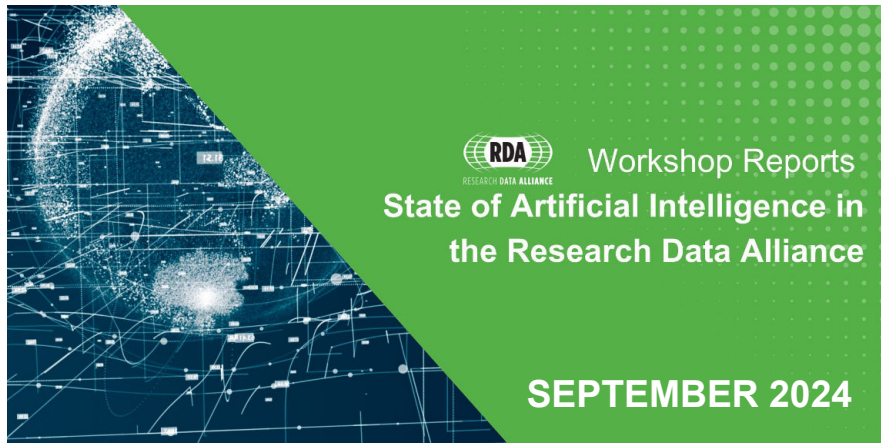
UK Research
and Innovation

Research Data
Alliance 27th
Plenary Meeting
(RDA P27)

LONDON, UNITED KINGDOM

6-8 OCTOBER 2026





Previous Activities

STATE OF AI

- RDA community members shared perspectives on **AI's opportunities and challenges**, focusing on data, software, and computational needs for responsible innovation.
- [Report](#) and [Summary](#)



AI IN ACTION

- Nine speakers across Europe, Asia, Australia demonstrated practical AI implementations, exploring reproducibility challenges.
- Outcome: recommendations and plans for future initiatives.
- [Report](#)



 In Accordance with the Public-Private Partnership Framework



Previous Activities

RDA-MICROSOFT ROUNDTABLE

- Determine how researchers **prepare data for AI** and **develop skills** for AI-driven research.
- [White Paper and Summary Slides](#) showcasing community dialogue, practical frameworks and best practices.

RDA-MICROSOFT ROUNDTABLE

- Determine how **emerging technologies transform research capabilities**.
- [White Paper and Summary Slides](#) showcasing community dialogue, practical frameworks and best practices.

Community Need Identified:



RDA-MICROSOFT ROUNDTABLE

- **Community recommendation** to invest in **automated data preparation tools**, robust metadata standards, and dedicated stewardship roles to enhance data readiness.
- **Agentic AI** emerged as top **area of interest** and **skilling need**.



Microsoft

RESEARCH DATA ALLIANCE

Agentic AI in support of Science and Research

- Global community consultation on **agentic AI in research**
 - Autonomously assist with research tasks from data analysis to publication
 - Accelerate research, lower costs and democratise access to tools
- **November 2025:** Survey and online information sessions
- **December 2025:** [Open report](#)
- **2026 onwards:** Open technology-agnostic blueprint for priority AI agent

How is the research community currently using agentic AI?

What needs and challenges exist?

Where could agentic AI have the greatest impact?

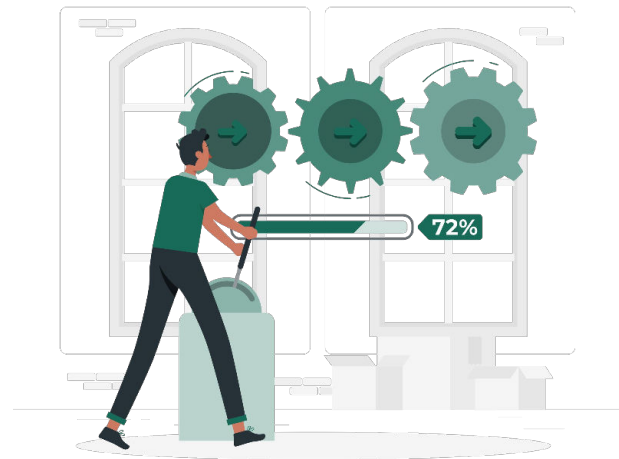


https://www.rd-alliance.org/value_rda/rda-and-artificial-intelligence/global-community-priorities-for-agentic-ai-development/

What is Agentic AI*?

Agentic AI refers to artificial intelligence systems that possess autonomy, goal-directed reasoning, and the ability to **act independently with minimal human oversight**. In contrast, traditional AI typically responds to direct prompts.

*This definition is used for the purposes of the global community consultation on Agentic AI in Research. We recognise that the broader community may hold different definitions, perceptions, and understandings of Agentic AI.





Microsoft

RESEARCH DATA ALLIANCE

Information Sessions

- **Four 45-minute online information sessions** across different time zones
- 190 registrants, **70 participants**, **33 countries** and **6 continents**
- **Open to all research stakeholders** regardless of AI expertise
- Live polling (Mentimeter) captured real-time feedback on **needs**, **concerns** and **priorities**
- Featured 5 expert speakers: AI agents, literature review tools, crop analysis, research data platforms



Australia

Moji Ghadimi

Head of AI & Quantum
Algorithms

Queensland Cyber
Infrastructure Foundation
(QCIF)

 [How to Build Your Own
Literature-Review Agentic AI](#) →



USA

Harang Ju

Assistant Professor
Johns Hopkins Carey Business
School

 [Collaborating with and
Building AI Agents](#) →



Singapore

Mukkesh Kumar

Head of Data Management
Platform
A*STAR

 [Agentic AI for Research Data
Platforms](#) →



Nigeria

Ugochi Okengwu

Associate Professor and Head
of Department of Computer
Science
University Port Harcourt

 [The Prospect of Agentic AI in
Crop Image Analysis](#) →



United Kingdom

Ryan Payton

Research Technology Strategist
Higher Education team
Microsoft UK

[Agentic AI in the
Research Lifecycle](#)



[Slides and recordings](#)



Microsoft

RESEARCH DATA ALLIANCE

Community Survey

- **15-minute anonymous survey** open throughout November
- **83 complete responses** from **25 countries**
- **~60% RDA members**, ~40% non-members
- Largest group: **Researchers & Scientists** (~40%)
- **~90% had used AI/ML tools**
- **55% had not used agentic AI systems specifically**

 **Evaluated 11 proposed agentic AI tools**
across research lifecycle stages*

*Extended Microsoft's previous engagement with over 50 research institutions (United Kingdom) that identified eleven potential agentic AI tools of use throughout the research lifecycle.

**TOP 3
PRIORITY**

Rank	AI Agent Tool
1	Literature Librarian
2	Data Director
3	Funding Finder
4	Literature and Data Wrangler
5	Research Refiner
6	Resource Finder
7	Research Reporter
8	Research Assessment Supporter
9	Collaboration Catalyst
10	Publication Preparer
11	Ethics Reviewer

Literature Librarian

- Natural language literature searching
- Integration with library subscriptions to access articles both open access and behind paywalls

Literature and Data Wrangler

- Scan the literature for gaps in knowledge/research
- Identify overlap of ideas with the literature to avoid repetition/encourage reuse of existing data
- Identify internal datasets which could be relevant and useful for a new project

Research Assessment Supporter

- Researchers: taking information and preparing it into an appropriate format template
- Institution: collecting information from researchers and preparing it to a template

Research Reporter

- Population of Researchfish/new solution based on provided information

Research Refiner

- Critical discussion of data presentation to improve communication quality
- Translation of research literature and figures for a specified audience – domain researcher, broad researcher or public



Report

3

Funding Finder

- Scan funding databases to match calls with your ideas
- Provides the template for your application and ensures you meet the guidelines
- Improvements/critiquing based on prior successful applications from the university

Ethics Reviewer

- Offers potential ethical issues for project proposals
- Provides guidance on meeting ethics requirements based on guidelines and prior ethics board decisions

Resource Finder

- Takes a researcher's goals and surfaces university services available to help
- Linked to lab facilities, IT infrastructure, RSEs, seminar groups, internal funding, etc...

Collaboration Catalyst

- Suggests internal colleagues to work with on specific challenges based on their profiles
- Surfaces dataset and facility owners who could collaborate on a project idea

Conducting research activities

Publication Preparer

- Identifies appropriate journals and special collections for your work
- Ensures your work is in scope, reducing rejection rate
- Provides appropriate journal templates and rewrites content to meet guidelines
- Generate evidenced novelty statements for editors

Publishing research

Presenting research

Reporting on research output and impact

Formulating new research questions

Planning research and applying for funding

New research idea

The Research Lifecycle

Data Director

- Automatic metadata creation, ensuring FAIR and FAIR2 principles are followed
- DOI minting
- Provides guidance on where the data should be stored to be compliant



RESEARCH DATA ALLIANCE



Microsoft

Key Opportunities of Agentic AI

- **Automation and efficiency** - Augments human capability, accelerates research processes, reduces time and cost
- **Reduces administrative burden** - Addresses pain points in metadata creation, compliance checking, literature searching, proposal formatting
- **Democratises access to support** - Valuable for smaller organisations without adequate support services
- **Navigates complex ecosystems** - Helps researchers find funding opportunities, literature, and appropriate data repositories
- **Improves standardisation and quality** - Reduces human error, enhances consistency in metadata and data management (FAIR principles)





RESEARCH DATA ALLIANCE



Microsoft

Key Challenges of Agentic AI

- **Accuracy and trust deficits** - AI hallucinations, errors requiring constant verification, inability to handle nuance
- **Transparency and explainability gaps** - Understanding how models work, defending processes; potential to misrepresent data or stifle innovation
- **Loss of research skills and critical judgement** - Reduced hands-on interaction may diminish abilities to justify conclusions and maintain research competencies
- **Human oversight imperative** - Human-in-the-loop crucial for responsible oversight, especially ethics and sensitive data; error propagation risks
- **Infrastructure and equity barriers** - Institutional policies, library contracts, IT protocols; unequal access, vendor lock-in, sustainability concerns





RESEARCH DATA ALLIANCE



Microsoft

Future Work

- The valuable insights from this consultation will guide the next phase of work in 2026
- Collaborative community development of an **open, technology-agnostic blueprint** for a **priority agentic AI tool**.
- This work will be executed with the **framework of the RDA** and adhere to the **RDA Guiding principles**.
- **Get Involved** –  **Connie Clare**
(connie.clare@rda-foundation.org)



Contact us

The Secretariat staff are employed by the RDA Foundation and some members are made available through in-kind support from Regional partners.

The Secretary General leads the Secretariat and is CEO of the RDA Foundation.

Hilary Hanahoe

Secretary General

hilary.hanahoe@rda-foundation.org

Connie Clare

Community Development Manager

connie.clare@rda-foundation.org

Irina Hope

Global Events Manager

irina.hope@rda-foundation.org

Trish Radotic

Community Development Manager Oceania & East Asia

trish.radotic@rda-foundation.org

Bridget Walker

Operations and Accounts Manager

bridget.walker@rda-foundation.org

**THANK YOU FOR
YOUR ATTENTION.**

ANY QUESTIONS?



In Collaboration with...



RDA's Public-Private Partnership Framework

1. **Facilitated RDA Working Groups** to develop solutions to research data challenges
2. **High-impact community activities** on mutual topics of interest

- Bridges **industry innovation** with research infrastructure needs
- Organisations **collaborate with data experts**, gain **global visibility** and **shape open standards**
- Brings **professional facilitation support**, **accelerated timelines**, **real-world implementation perspectives**
- Adheres to **RDA Guiding Principles** and **processes**